

REMARKS

This application has been reviewed in light of the Office Action dated October 31, 2006.

Claims 1, 3-8, 10-12, 14, 15 and 17-29 are now presented for examination. Claims 2, 9, 13 and 16 were previously cancelled without prejudice. Claims 1, 7, 20, 26 and 28 have been amended to more particularly point out and distinctly claim the subject matter regarded as the invention. Claims 1, 20, 26 and 28 are independent. Favorable review is respectfully requested.

The drawings were objected to by the Examiner, the Examiner stating that they were of poor quality and failing to meet formal requirements. Three replacement drawing sheets, each labeled "Replacement Sheet" as required by 37 C.F.R. § 1.121(d), are submitted herewith. No new matter has been added.

The abstract was objected to because of undue length. In response to this objection, the abstract has been deleted and replaced in accordance with 37 C.F.R. § 1.121(b)(2).

The title was objected to as not descriptive. In response to this objection, the title has been deleted and replaced in accordance with 37 C.F.R. § 1.121(b)(1).

The disclosure was objected to because of informalities. In response to the Examiner's comments, the Summary of the Invention section, the Brief Description of Drawings section and the Detailed Description section have all been amended. The amendment to the Summary deletes the reference to the claims deemed improper by the Examiner, and adds a summary description of the claimed invention. The amendment to the Brief Description of Drawings replaces the phrase "embodiments of Figure 1" with "--embodiment shown in Figure 1.--" The amendment to the Detailed Description section provides antecedent basis for the terms "connecting means," "releasable clamping means," and "unidirectional gripping means" appearing in the claims, as required by the Examiner. No new matter has been added by any of these amendments.

Claims 1, 3-8, 10-12, 14, 15 and 17-25 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. The Examiner stated that the claim feature "wherein said tension or compression is achieved through pushing or pulling said spring through said unidirectional gripping means" was not properly described in the

specification. In response to the Examiner's comments, the quoted phrase has been removed from independent claims 1 and 20.

Claims 1, 3-8, 10-12, 14, 15 and 17-25 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner stated that the term "said attachment means," as used in the claims, rendered the claims indefinite. Independent claims 1 and 20 have been amended to recite --said at least one of said attachment means-- as kindly suggested by the Examiner.

Claims 1, 3-8, 10-12, 14, 15 and 17-29 were rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter. The Examiner stated that the language of independent claims 1, 20, 26, 28 needed to be amended to avoid positively reciting the human body. In response to the Examiner's comments, the independent claims have been amended to recite --force is capable of being applied-- in place of "force is applied" and --force is capable of urging-- in place of "force urges."

Claims 1, 4-8, 10, 11, 14, 15, 17 and 20-29 were rejected under 35 U.S.C. § 102(b) as being anticipated by Martin (U.S. Pat. No. 5,672,175). Dependent claims 3, 12, 18 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Martin. The applicants wish to point out that in the previous Amendment (dated August 23, 2006) the claims were reviewed and revised in accordance with an indication by the previous Examiner of allowable subject matter. No new prior art has been cited, and no clear error by the previous Examiner has been alleged. (See MPEP § 706.04). Nevertheless, in the interest of advancing prosecution, the applicants again respectfully submit that independent claims 1, 20, 26 and 28 are patentable over the cited art, for the reasons detailed below.

Martin is understood to disclose an implanted spinal orthosis which includes rods 4a, 4b connected to anchoring elements 1, 2, 3 (col. 8, line 66, to col. 9, line 1). A coil spring 21a, 21b (separate from the rods) is provided for each rod (col. 12, lines 9-19). Each end of the spring is connected to a ring 29 surrounding the respective rod (col. 12, lines 27-35). Both the rods and the springs are connected to the anchoring components so that the elastic return forces they exert may be modified (col. 12, lines 59-67). Adjustment means 35, 36 may be interposed between a spring and a support component to increase or decrease the length of the springs (col. 13, lines 2-8). The adjustment means may be an electronic micromotor or a manual adjustment device. The micromotor has a plate 40 which bears on the end of the spring, and

slides in axial translation with respect to the stator 39 of the motor (col. 13, lines 18-20). The manual adjustment device has a rack-and-pinion arrangement to actuate axial movement of one cylinder with respect to another (col. 13, lines 37-45).

It is clear from the discussion in Martin that the adjustment means allows motion (indeed, causes motion) of the springs in either axial direction, in order to increase or decrease the length of the springs. In contrast to Martin, claims 1 and 20 explicitly recite a unidirectional gripping means that allows motion of a spring in one axial direction relative to the attachment means, but prevents motion in the opposite direction.

Martin clearly does not disclose or suggest a unidirectional gripping means as required by claims 1 and 20. In particular, there is no teaching or suggestion in Martin that micromotor 35 or manual adjustment device 36 allow movement in one axial direction while preventing movement in the other direction. Furthermore, since Martin clearly is concerned with increasing or decreasing the length of a spring, there is no suggestion that a unidirectional gripping means would be desirable.

Accordingly, independent claims 1 and 20 are neither anticipated nor rendered obvious by the Martin reference.

Martin also is understood to disclose a means 5a of coupling an elastic rod to anchoring component 1; this coupling means includes a sphere 8 in a spherical housing 9 in a cylinder 10, forming part of a connecting pivot (col. 9, lines 37-41). It should be noted that the sphere 8 has a cylindrical bore 11, so that the rod passes through the sphere and can slide in longitudinal axial translation (col. 9, lines 42-44). The rod clearly does not end at the sphere, but rather extends beyond the sphere and has an end portion surrounded by a spring 23a bearing on the cylinder, a ring 29 and a nut 34 (col. 12, lines 27-29 and 46-50, and Figure 1).

In contrast to Martin, independent claims 26 and 28 explicitly recite a mobile joint provided by an interface between one end of a unidirectional force generating means and a connecting means. A rod passing through a sphere cannot provide a mobile joint as required by claims 26 and 28. Furthermore, Martin is concerned with applying elastic return forces and torsional forces using the springs surrounding the rods; accordingly, Martin teaches that it is desirable to have springs acting on the anchoring components from both directions (col. 12, lines 27-31). Martin thus does not teach or suggest that a unidirectional force generating means

end at a mobile joint, and in particular does not suggest that such an arrangement would be desirable.


Independent claims 26 and 28 are therefore neither anticipated nor rendered obvious by the Martin reference.

The other claims in this application are dependent, either directly or indirectly, from the independent claims discussed above and are therefore believed to be patentable for the same reasons. Since each dependent claim is deemed to define an additional aspect of the invention, however, consideration of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, favorable consideration and early passage to issue of the application are respectfully requested.

The applicants' undersigned attorney may be reached by telephone at (212) 801-2217. All correspondence should continue to be directed to the address listed below, which is the address associated with Customer Number 32361.

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